

We claim:

1. A method to modulate fibrous tissue formation comprising administering to an individual in need of treatment thereof an effective amount of a dermatan sulfate or chondroitin sulfate degrading enzyme.

5 2. The method of claim 1 wherein the enzyme is selected from the group consisting of bacterial dermatan or chondroitin sulfate degrading enzyme and is selected from the group consisting of chondroitinase AC from *Flavobacterium heparinum*, chondroitinase B from *Flavobacterium heparinum*, chondroitin sulfate degrading enzymes from *Bacteroides* species, chondroitin sulfate degrading enzymes from *Proteus vulgaris*, chondroitin sulfate degrading enzymes from *Micrococcus*, chondroitin sulfate degrading enzymes from *Vibrio* species, chondroitin sulfate degrading enzymes from *Arthrobacter aurescens*, arylsulfatase B, N-acetylgalactosamine-6-sulfatase and iduronate sulfatase from mammalian cells, these enzymes expressed from recombinant nucleotide sequences in bacteria and combinations thereof.

15 3. The method of claim 1 wherein the enzyme is a mammalian enzyme.

4. The method of claim 1 wherein the enzyme is a bacterial enzyme.

5. The method of claim 4 wherein the chondroitinase is chondroitinase B.

6. The method of claim 1 wherein the individual has a skin disorder.

7. The method of claim 6 wherein the skin disorder is scleroderma or psoriasis.

8. The method of claim 1 wherein the individual has keloid scarring or is at risk of keloid scarring, or has pulmonary fibrosis.

9. The method of claim 1 wherein the enzyme is administered systemically.

10. The method of claim 1 wherein the enzyme is administered topically or locally at or adjacent to a site in need of treatment.

11. The method of claim 1 wherein the enzyme is administered in a controlled and/or sustained release formulation.

5 12. A formulation for administration to an individual in need of treatment thereof for a disorder involving organ fibrosis, the formulation comprising an effective amount of a dermatan or chondroitin sulfate degrading enzyme to inhibit fibrosis, wherein the dosage is different than the amount effective for wound healing, and a pharmaceutically acceptable carrier.

10 13. The formulation of claim 12 wherein the enzyme is selected from the group consisting of bacterial chondroitin sulfate degrading enzyme and is selected from the group consisting of chondroitinase AC from *Flavobacterium heparinum*, chondroitinase B from *Flavobacterium heparinum*, chondroitin sulfate degrading enzymes from *Bacteroides* species, chondroitin sulfate degrading enzymes from *Proteus vulgaris*, chondroitin sulfate degrading enzymes from *Micrococcus*, chondroitin sulfate degrading enzymes from *Vibrio* species, chondroitin sulfate degrading enzymes from *Arthrobacter aureescens*, these enzymes expressed from recombinant nucleotide sequences in bacteria and combinations thereof.

15 20 14. The formulation of claim 12 wherein the enzyme is a mammalian enzyme.

15. The formulation of claim 12 wherein the enzyme is a bacterial chondroitinase.

16. The formulation of claim 15 wherein the chondroitinase is
25 chondroitinase B.

17. The formulation of claim 12 wherein the enzyme is in a controlled, sustained release formulation.

18. The formulation of claim 12 in a dosage effective to collagen synthesis.

19. The formulation of claim 12 in an effective aerosol formulation for delivery to the lungs.